

What is claimed is:

- 5 1. A molded fuel cell end plate fabricated from a long fiber reinforced thermoplastic resin composite, which composite comprises:
  - (a) a thermoplastic resin; and
  - (b) at least about 30 weight percent of long strand glass fiber at  
10 least about 5mm in length..
2. A fuel cell endplate as described in claim 1 wherein the diameter of the long strand glass fiber is from about 10 micron to about 25 micron.
- 15 3. A fuel cell endplate as described in claim 2 wherein said composite contains from about 40 to about 60 weight percent of said long strand glass fiber.
4. A fuel cell endplate as described in claim 2 wherein said long strand glass fiber is from about 5mm to about 20mm in length.  
20
5. A fuel cell endplate as described in claim 3 wherein said thermoplastic resin component (a) comprises a thermoplastic polymer selected from the group consisting of partially aromatic polyamides, polyarylsulfones, polyaryletherketones, polyaryletheretherketones, polyaryletherimides,  
25 polyarylimides, polyarylene sulfide, aromatic thermotropic liquid crystal polymers, and the like.
6. A fuel cell endplate as described in claim 5 wherein said long strand glass fiber is from about 15 micron to about 20 micron in diameter.
- 30 7. A fuel cell endplate as described in claim 6 wherein said thermoplastic resin component (a) comprises polyarylene sulfide or aromatic thermotropic liquid crystal polymer.

8. A fuel cell endplate as described in claim 5 wherein said composite contains at least about 50 weight percent of said long strand glass fiber.
9. A fuel cell endplate as described in claim 8 wherein said thermoplastic resin component (a) comprises polyphenylene sulfide.
10. A fuel cell endplate as described in claim 6 wherein said long strand glass fiber is incorporated in said composite by pultrusion techniques.
11. A fuel cell end plate as described in claim 2 which is fabricated as a single injection molded part.
12. A fuel cell endplate as described in claim 2 wherein said composite has a calculated creep resistance of less than 2.0.
13. A fuel cell endplate as described in claim 5 wherein said composite has a calculated resistance of less than 1.6.
14. An injection molded fuel cell endplate fabricated from a pultruded long fiber reinforced thermoplastic resin composite which composite comprises:
  - a) polyphenylene sulfide; and
  - b) about 45 to about 55 weight percent of long strand glass fiber, wherein the long strand glass fiber is from about 10mm to about 15mm in length and from about 15 micron to about 20 micron in diameter.
15. A fuel cell endplate assembly comprising a fuel cell endplate as described in claim 1.
16. A fuel cell endplate assembly comprising a fuel cell end plate as described in claim 5.
17. A fuel cell endplate assembly as described in claim 16 wherein the end plate functions as a compression plate.

18. A fuel cell endplate assembly as described in claim 17 which lacks a separate compression plate.

5

10

15

20

25

30

35